

## Camas National Wildlife Refuge

### Treating Invasive Weeds in the Upper Snake River Plain

#### Project Description:

Just over one year ago, Pheasants Forever, acting as a conservation buyer purchased a 2,700 acre tract of land connecting Camas NWR (10,580 acres) and Mud Lake WMA (11,350 acres). Pheasants Forever will be selling this tract to the State of Idaho and the Service (Bunker Hill) for the purpose of wildlife management. This connection will allow the Idaho Fish and Game (IDFG) and U.S. Fish and Wildlife Service (Service) to manage these tracts as one unit for wildlife management. None of the three properties have been completely mapped to determine total acreages of invasive plants. Much of the Pheasants Forever tract had been abused by over grazing of cattle and horses. This has led to a serious invasion of Russian knapweed which has gained a strong hold on the landscape. Canada thistle, musk thistle, white top, black henbane and leafy spurge are present on all three tracts. Funds from this grant will implement three measures to control the invasive plants on all three properties. The first measure is to assure the mapping of infestations and search for new infestations continues. The Service has mapped certain species on specific areas of Camas, but the data is not complete throughout the entire refuge. The State of Idaho dedicated resources to mapping of the Pheasants Forever tract last year, but less than half the tract was completed. The second measure will implement control methods. Control methods to be used: early detection, rapid response efforts will be employed on any new or expanding infestations and biological controls will be used on both Canada and musk thistle, which are prevalent along wetland margins and water delivery ditches. Herbicides will be employed on species such as Russian knapweed and white top to bring these species within threshold levels. The third measure is to make sure monitoring efforts are put into place to assure that the control measures implemented are being effective.

#### What is the potential for eradication of the invasive species?

It is not likely that we will be able to eradicate any of the species from the treatment areas. We will establish threshold levels for the main invasive species which will drive our treatment efforts.

#### Does the project support achieving the refuge purpose?

Invasive plants, such as, Canada and musk thistle tend to first establish in and around riparian zones and wetlands and then spread to upland habitat sites. These habitats are extremely important to the migratory birds for which Camas NWR was established. Russian knapweed, in particular, has been invading sage-steppe habitat in this area, this type of habitat has been recently documented as one of the western habitats that is in serious decline. Controlling species such as Russian knapweed is extremely important in trying to keep sage steppe habitat intact in the area. Supporting invasive species control efforts on the Pheasants Forever tract will help the Refuge invasive efforts. This tract lies to the southwest of the Camas NWR boundary and prevailing winds blow seeds that establish on Refuge lands.

#### Does the project support biological integrity?

Removing at least the bulk of the invasive species described above, will allow native vegetation to flourish within our boundaries. Wetland resources in SE Idaho have been on the decline due to the over utilization of the area water resources, mainly ground water table depletion. Maintaining healthy wetlands and, native wetland vegetation is extremely important to the migratory water birds that use the area as a migratory stopover and for nesting purposes. Also, maintaining healthy sage-steppe upland habitat will improve conditions for native species such as the greater sage-grouse, sage thrasher

and others. Currently, invasive plant species are a major threat to the sage steppe habitat that is on or borders the Refuge.

**Will the project involve support from partners?**

Yes: This project has already received support from a variety of partners to include: Continental Divide Weed Management Area (CWMA), Pheasants Forever, Idaho Department of Fish & Game (IDFG), Jefferson County Weed Control and U.S. Fish and Wildlife Service (FWS). Previous to Pheasant Forever purchasing the property, Jefferson County had funded projects to aerial spray Russian knapweed on the property. Since Pheasants Forever has purchased the property, the CWMA has provided more than \$5000 in grant funds to purchase biological controls and herbicide for invasive treatments and has hosted a collaborative spray day. IDFG provided funds to hire a fixed-winged aircraft to have approximately 200 acres of upland treated, with the herbicide. IDFG also provide salary and equipment to map invasive weeds on approximately 1000 acres of the property. The FWS concentrated on an 80 acre piece of the Pheasants Forever tract that is surrounded by refuge on three sides. The FWS spent approximately 30 man hours and close to \$650 of herbicide treating Russian knapweed and musk thistle on the 80 acre tract. All the partners have pledged support to continue this project and will help with man hours and funding where available to address the many issues.

**What monitoring will be used to evaluate the project?**

All identified invasive weed sites and all treated areas have been mapped using a GPS unit. The FWS used ArcMap/ RLGIS to track accomplishments both on and off refuge lands. The IDFG uses a comparable system to track their accomplishments. Monitoring efforts will include stem density plots that will be established randomly in weed patches that have been spatially recorded. Plots will be established in thistle patches to measure effectiveness of biological control agents. In Russian knapweed patches, plots will be established to determine the effectiveness of different styles of herbicide application (aerial vs boom), different timing of applications and/or different herbicide applications. All monitoring sites will have an associated control plot.

**Budget Table 1.0**

Item	Requesting Funding
Seasonal Mapping Technician (12 weeks?)	\$10,000
Biological Control Agents (thistle bugs)	\$5,000
Herbicide (Milestone and Telar)	\$6,000
New GPS Unit	\$6,000
<b>Total</b>	<b>\$27,000</b>

If the total project cannot be funded, we are willing to accept the funding of a single line item or combination thereof. Any funding will help the partnership move forward in mapping and treatment of the infestations on these lands.